SyncMaster

SERIES 3 | TB301

LED TV MONITOR

(MFM TV)

user manual

Thank you for purchasing this Samsung product.
To receive more complete service, please register your product at

www.samsung.com/register

SAMSUNG

Figures and illustrations in this User Manual are provided for reference only and may differ from actual product appearance. Product design and specifications may be changed without notice.

Still image warning

Avoid displaying still images (such as jpeg picture files) or still image elements (such as TV channel logos, panorama or 4:3 image format, stock or news bars at screen bottom etc.) on the screen. Constant displaying of still picture can cause ghosting of screen, which will affect image quality. To reduce risk of this effect, please follow below recommendations:

- Avoid displaying the same TV channel for long periods.
- Always try to display a full screen image.
- Reducing brightness and contrast will help to avoid the appearance of after-images.
- Use all TV features designed to reduce image retention and screen burn, refer to proper user manual section for details.

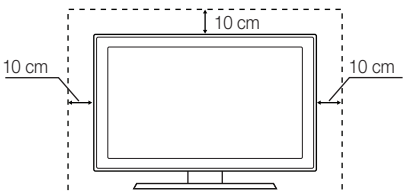
Securing the Installation Space

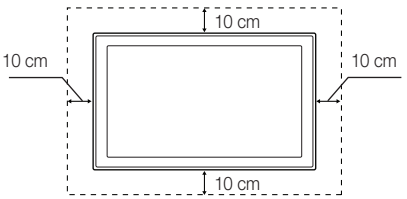
Keep the required distance between the product and other objects (e.g. walls) to ensure proper ventilation.
Failing to do so may result in fire or a problem with the product due to an increase in the internal temperature of the product.

✎ The actual appearance of the TV may differ from the images in this manual, depending on the model.

✎ Be careful when you touch the TV. Some parts can be somewhat hot.

Installation with a stand	Installation with a wall-mount





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Check the Symbol!

TOOLS

This function can be used by pressing the **TOOLS** button on the remote control.

Indicates additional information.

Getting Started

Safety Precautions

Icons used for safety precautions

WARNING	Failing to follow the precautions marked with this sign may result in a serious injury or even a fatality.
CAUTION	Failing to follow the precautions marked with this sign may result in a personal injury or property damage.

Do not perform.

Must be followed.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.

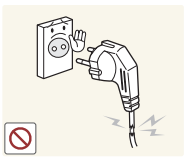
This symbol indicates that high voltage is present inside. It is dangerous to make any kind of contact with any internal part of this product.

This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

Power Related

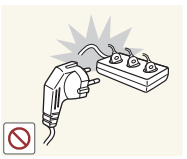
The following images are for your reference and may differ depending on models and countries.

Warning



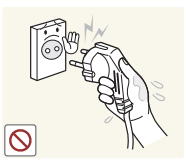
Avoid using a damaged power cord or plug or a loose power outlet.

- Otherwise, it may result in electric shock or fire.



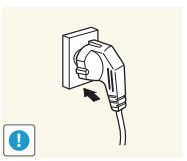
Avoid connecting multiple electric appliances to a single wall outlet.

- Otherwise, it may result in fire due to overheating of the wall outlet.



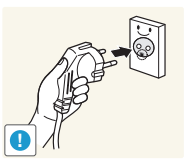
Avoid plugging in or unplugging the power supply with wet hands.

- Otherwise, it may result in electric shock.



Plug the power plug in firmly.

- Otherwise, it may result in fire.

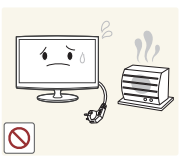


Make sure to connect the power cord to a grounded wall outlet (for insulation class 1 equipment only).

- Otherwise, it may result in electric shock or injury.

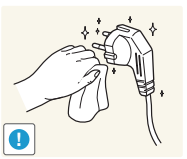
Avoid bending or twisting the power cord excessively and avoid placing heavy objects on the cord.

- Otherwise, it may result in electric shock or fire due to a damaged power cord.



Keep the power cord and the product away from a heater.

- Otherwise, it may result in electric shock or fire.



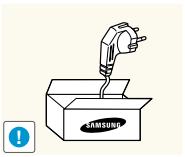
If the pins of the power plug or the wall outlet are covered in dust, clean it using a dry cloth.

- Otherwise, it may result in fire.

Caution

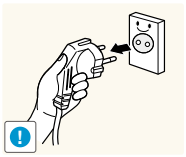
Avoid unplugging the power plug while the product is operating.

- Otherwise, it may damage the product due to electric shock.



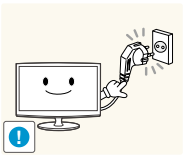
Make sure to use only the power cord supplied by our company. In addition, do not use the power cord of another electric appliance.

- Otherwise, it may result in electric shock or fire.



When unplugging the power plug from the wall outlet, make sure to hold it by the plug and not by the cord.

- Otherwise, it may result in electric shock or fire.



Connect the power plug to a wall outlet that can be easily reached.

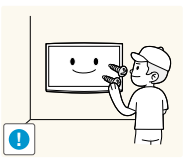
- When a problem occurs with the product, you must unplug the power plug to cut the power off completely. You cannot cut the power off completely using only the power button on the product.

Installation Related

Warning

Avoid placing burning candles, mosquitorepellentor cigarettes on the product.

- Otherwise, it may result in fire.



Ask an installation engineer or relevant company to install the product onto the wall.

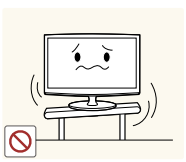
- Otherwise, it may result in injury.
- Make sure to use the specified wall mount.

Avoid installing the product in a badly-ventilated location such as inside a bookshelf or closet.

- Otherwise, it may result in fire due to internal over-heating.

Keep the plastic bags used to pack the product away from children.

- If children place the plastic bags over their heads, they may suffocate.

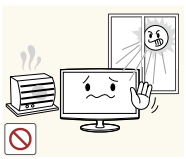


Avoid installing the product in a location that is unstable or exposed to excessive vibration such as on an unstable or slanted shelf.

- The product may fall and this may result in damage to the product or injury.
- If you use the product in a location exposed to excessive vibrations, it may result in a problem with the product or fire.

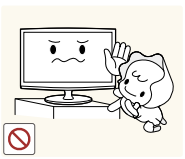
Avoid installing the product in a location exposed to dust, moisture (sauna), oil, smoke or water (rain drops) and installing it within a vehicle.

- This may result in electric shock or fire.



Avoid installing the product in a location exposed to direct sunlight and installing the product near a heat source such as a fireplace or heater.

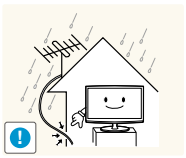
- This may shorten the product life cycle or cause fire.



Avoid installing the product where children may reach it.

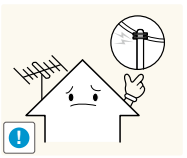
- If a child touches the product, the product may fall and this may result in injury.
- Since the front part is heavier, install the product on a flat and stable surface.

Getting Started



Bend the outdoor antenna cable downwards at the location where it comes in the house so that rainwater does not flow in.

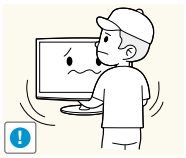
- If rainwater enters the product, it may result in electric shock or fire.



Install the antenna far away from any high voltage cables.

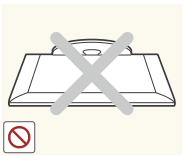
- If the antenna touches or falls onto a high voltage cable, it may result in electric shock or fire.

Caution



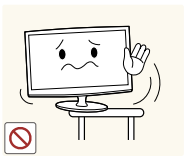
Do not let the product drop while moving it.

- This may result in a problem with the product or injury.



Do not place the product face down on the floor.

- This may damage the panel of the product.



When installing the product on a console or shelf, make sure that the front of the product does not protrude out of the console or shelf.

- Otherwise, this may cause the product to fall off and result in a malfunction or injury.
- Make sure to use a cabinet or shelf suitable to the size of the product.

When putting the product down, handle it gently.

- Otherwise, it may result in a problem with the product or injury.

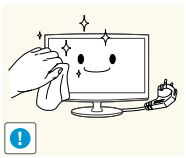
If the product is installed in a location where the operating conditions vary considerably, a serious quality problem may occur due to the surrounding environment. In this case, install the product only after consulting one of our service engineers about the matter.

- Places exposed to microscopic dust, chemicals, too high or low temperature, high humidity, airports or stations where the product is continuously used.

Getting Started

Cleaning Related

Warning



Before cleaning the product, unplug the power cord.

- Otherwise, it may result in electric shock or fire.

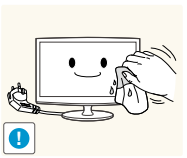
When cleaning the product, do not spray water directly over the product parts.

- Make sure that water does not enter the product.
- Otherwise, it may result in fire, electric shock or a problem with the product.

Caution

Avoid spraying cleansing agent directly onto the product.

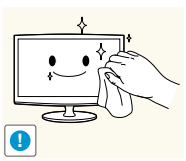
- This may result in discoloration or cracking of the exterior of the product or the panel coming off.



When cleaning the product, disconnect the power cord and clean the product with the supplied cleaning cloth.

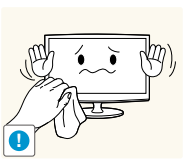
- Avoid using chemicals such as wax, benzene, alcohol, thinner, mosquitorepellent, fragrance, lubrication or cleansing agent when cleaning the product.

  This may result in the exterior being deformed or the print being removed.



If you can't get the product clean with just the supplied cloth, use a soft, damp cloth with a "monitor-exclusive cleansing agent" and wipe the product with it.

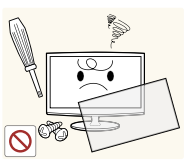
- If no monitor-exclusive cleansing agent is available, dilute a cleansing agent with water at a ratio of 1:10 before cleaning the product.



Since the exterior of the product is easily scratched, be sure to use the supplied cleansing cloth.

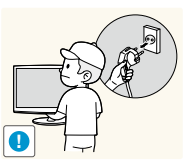
Usage Related

Warning



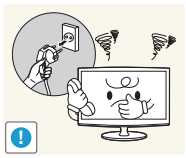
Since a high voltage runs through the product, never disassemble, repair or modify the product yourself.

- Otherwise, it may result in fire or electric shock.
- If the product needs to be fixed, contact a service center.



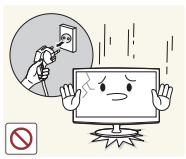
To move the product, turn the power off and unplug the power cord, the antenna cable and any other wires connected to the product.

- Otherwise, it may result in electric shock or fire due to the damaged power cord.



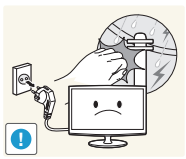
If the product generates a strange noise, a burning smell, or smoke, unplug the power plug immediately and contact a service center.

- Otherwise, it may result in electric shock or fire.



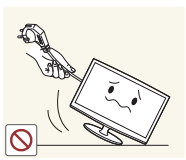
If you drop the product or the case is damaged, turn the power off and unplug the power cord. Contact a service center.

- Otherwise, it may result in fire or electric shock.



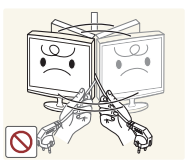
When thunder or lighting occurs, unplug the power cord and under no circumstance touch the antenna cable as this is dangerous.

- Otherwise, it may result in electric shock or fire.



Avoid moving the product by pulling the power cord or antenna cable.

- Otherwise, it may result in electric shock, fire or a problem with the product due to damage to the cable.

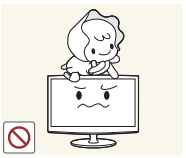


Avoid lifting up or moving the product by holding only the power cord or signal cable.

- Otherwise, it may result in electric shock, fire or a problem with the product due to damage to the cable.

Take care not to block the vent by a table cloth or curtain.

- Otherwise, it may result in fire due to internal overheating.



Avoid letting children hang or climb onto the product.

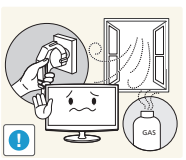
- Otherwise, it may result in the product falling and this may result in injury or death.

Avoid placing objects such as toys and cookies on top of the product.

- If a child hangs over the product to grab an object, the object or the product may fall and this may result in injury or even death.

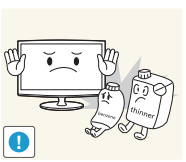
Avoid dropping an object over the product or cause impact to the product.

- Otherwise, it may result in electric shock or fire.



When a gas leak occurs, do not touch the product or the power plug and ventilate immediately.

- A spark may result in an explosion or fire.
- During a thunder or lighting storm, do not touch the power cord or antenna cable.



Avoid using or placing inflammable spray or objects near the product.

- This may result in an explosion or fire.

Avoid inserting metal objects such as a chopsticks, coins or hairpins, or inflammable objects into the product (the vents, ports, etc).

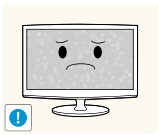
- If water or substances enters the product, turn the power off, unplug the power cord and contact a service center.
- Otherwise, it may result in a problem with the product, electric shock or fire.

Avoid placing a liquid container such as a vase, flowerpot, beverage, cosmetics or drugs, or a metal object over the product.

- If water or substances enter the product, turn the power off, unplug the power cord and contact a service center.
- Otherwise, it may result in a problem with the product, electric shock or fire.

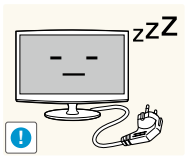
Do not press down hard on the product. The product may become deformed or damaged.

⚠ Caution



Displaying a still image for a long time may create a persistent image or stain on the screen.

- If you do not use the product for a long time, use the power-saving mode or set the screensaver to the moving picture mode.

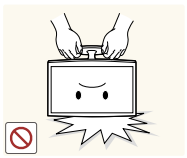


When not using the product for a long time such as leaving your home, unplug the power cord from the wall outlet.

- Otherwise, it may cause dust accumulation and result in fire caused by overheating or short circuit or result in an electric shock.

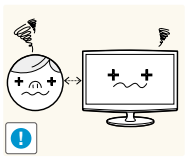
Set the appropriate resolution and frequency for the product.

- Otherwise, it may result in eye strain.



Avoid turning the product upside down or move the product holding only the stand.

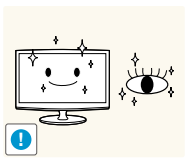
- This may cause the product to fall, resulting in damage to the product or injury.



Watching the product from too close a distance continuously may damage your eyesight.

Avoid using a humidifier or cooker near the product.

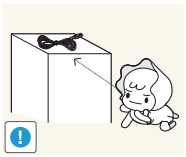
- Otherwise, it may result in electric shock or fire.



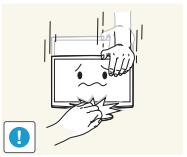
It is important to give your eyes some rest (5 minutes every hour) when viewing the product screen for long periods of time.

- This will alleviate any eye strain.

Since the display panel is hot after using it for a long time, do not touch the product.

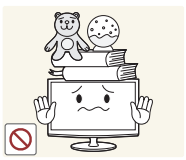


Keep the small accessories in a location out of the reach of children.



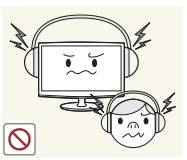
Take care when adjusting the angle of the product or the height of the stand.

- If your hand or finger is caught, you may be injured.
- If the product is tilted excessively, the product may fall and this may result in injury.



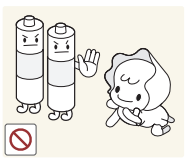
Avoid placing a heavy object over the product.

- Otherwise, it may result in a problem with the product or injury.



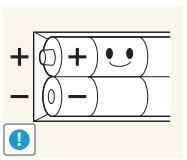
When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.



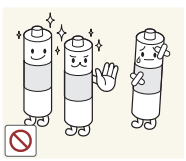
Be careful that children do not place the batteries in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

- If children have had the battery in their mouths, consult your doctor immediately.



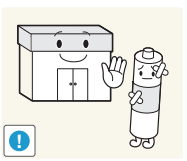
When replacing the batteries, insert them with right polarity (+, -).

- Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.



Use only specified standard batteries. Do not use new and used batteries together.

- This may cause a battery to break or leak and may cause fire, injury, or contamination (damage).



The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

- The customer can return used or rechargeable batteries to a nearby public recycling center or to a store selling the same type of the battery or rechargeable battery.

Getting Started

List of Features

- **Media Play**: Allows you to play movie, music files and pictures saved on a USB device.
- **Self Diagnosis**: You can check whether picture or sound operate normally.

Accessories

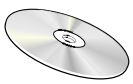
✎ Please make sure the following items are included with your TV. If any items are missing, contact your dealer.

✎ The items' colors and shapes may vary depending on the models.

✎ Cables not included in the package contents can be purchased separately.

✎ Check that there is no accessory hidden behind packing materials when you open the box.

- Remote Control & Batteries (AAA x 2) (Not available in some locations)
- Warranty Card / Safety Guide (Not available in some locations)
- Cleaning Cloth
- Power cord

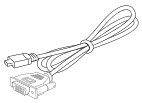


- User Manual

- Quick Setup Guide

Input Cables (Sold Separately)

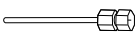
HDMI



HDMI-DVI

Component

Composite (AV)



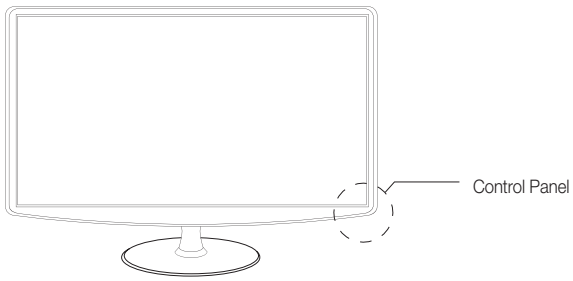
Coaxial (RF)

- Stereo Cable

Getting Started

Viewing the Control Panel

✎ The product color and shape may vary depending on the model.

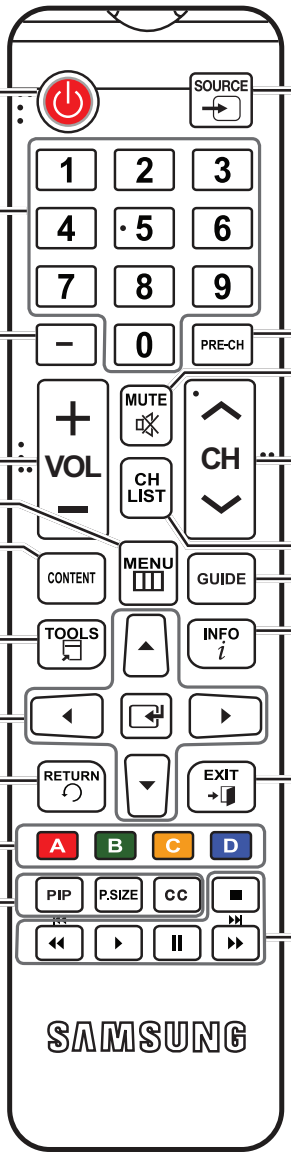


SOURCE ⏎	Toggles between all the available input sources. In the on-screen menu, use this button as you would use the ENTER ⏎ button on the remote control.
MENU	Displays an on-screen menu, the OSD (on screen display) of your TV features.
– VOL +	Adjusts the volume. In the OSD, use the – VOL + buttons as you would use the ◄ and ► buttons on the remote control.
∨ CH ∧	Changes the channels. In the OSD, use the ∨ CH ∧ buttons as you would use the ▼ and ▲ buttons on the remote control.
⏻ (Power)	Turns the TV on or off.
Power Indicator	Blinks and turns off when the power is on and lights up in standby mode.
Remote control sensor	Aim the remote control towards this spot on the TV.

Standby mode

Do not leave your TV in standby mode for long periods of time (when you are away on a holiday, for example). A small amount of electric power is still consumed even when the power button is turned off. It is best to unplug the power cord.

Viewing the Remote Control



Turns the TV on and off.

Displays and selects the available video sources.

Have direct access to channels.

Brazil only : Press to select additional channels (digital) being broadcasted by the same station. For example, to select channel “54.3”, press “54”, then press “-” and “3”.

Returns to the previous channel.

Cuts off the sound temporarily.

Adjusts the volume.

Changes channels.

Displays the main on-screen menu.

Displays channel lists on the screen.

Displays the Content Home, which includes **Channel List, Guide, Media Play, Schedule Manager** and **Source**.

Displays the EPG (Electronic Programme Guide).

Quickly select frequently used functions.

Displays information on the TV screen.

Move the cursor and select an item. Confirm the setting.

Returns to the previous menu.

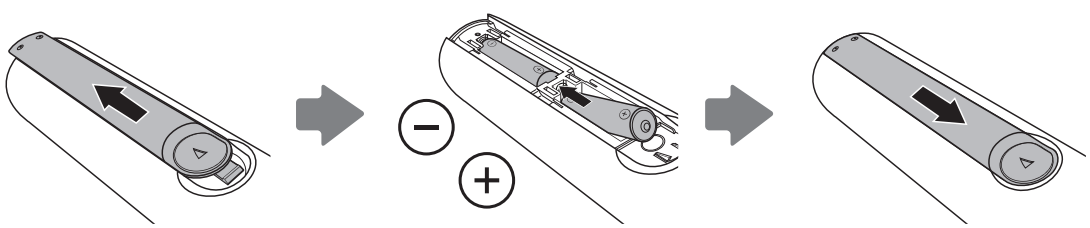
Exits the menu.

Use these buttons according to the direction on screen.

PIP: Turns the **PIP** on or off.
P.SIZE: Selects the **Picture Size**.
CC: Displays digital subtitles.

Using these buttons in **Media Play** mode.

Installing batteries (Battery size: AAA)

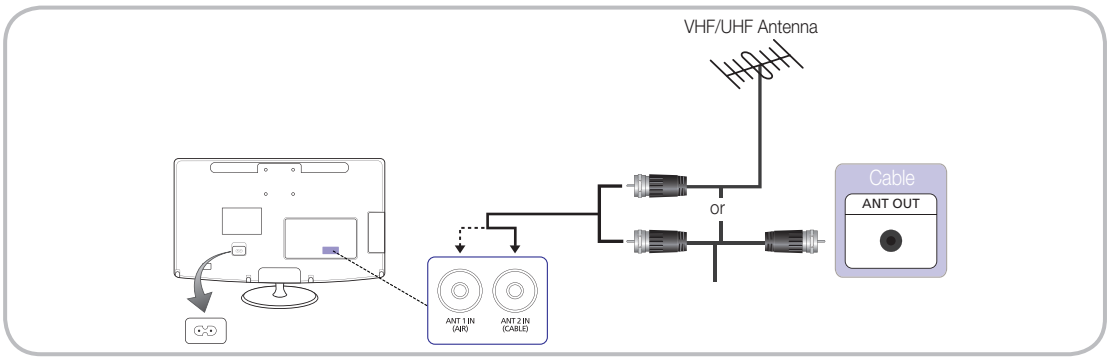


Connections

Connecting to an Antenna

When the TV is initially powered on, basic settings proceed automatically.

✎ Connecting the power cord and antenna.



Setup (Initial Setup)

When the TV is initially powered on, a sequence of on-screen prompts will assist in configuring basic settings. Press the POWER ⏻ button.

✎ **Setup** is available only when the Input **Source** is set to **TV**.

1	Selecting a language	Press the ▲ or ▼ button, then press the ENTER ↵ button. Select the desired OSD (On Screen Display) language.
2	Selecting **Store Demo** or **Home Use**	Press the ▲ or ▼ button, then press the ENTER ↵ button. • Select the **Home Use** mode. **Store Demo** mode is for retail environments. • To return the unit's settings from **Store Demo** to **Home Use** (standard): Press the volume button on the TV. When you see the volume OSD, press and hold MENU for 5 sec. • **Store Demo** is only for shop display. If you select it, several functions are not able to use. Please select **Home Use** when you watch at home.
3	Auto Program	Let's find and store channels on your TV. Do you need to search for channels? • **Yes, I need to.** All the channels available will be found and stored on your TV. • **No, I don't need to.** My set-top box provides all the channels that are available, so I don't need to searh for channels. ✎ You can complete **Setup** by selecting it. To run auto program, please select **Next** button. Then set the search options for anto tuning. • If the antenna is connected to ANT 1 IN (AIR), select **Air** and if it is connected to ANT 2 IN (CABLE), select **Cable**. After selecting the antenna source to memorize, select **Next**. The TV will begin memorizing all of the available channels.
4	Setup Clock	Set the **Clock Mode** automatically or manually. • **Auto**: Allows you to select time zone. • **Manual**: Allows you to manually set the current date and time. • Select time zone you are in by pressing the ▲ or ▼ button. Press the ENTER ↵ button to confirm your choice. ✎ If the customer choose **"Manual"** set clock, this step doesn't display.
5	**Complete**	Press the ENTER ↵ button.

If You Want to Reset This Feature...

MENU ☰ → **System** → **Setup** → ENTER ↵

You should do **Setup** again at home although you did in shop.

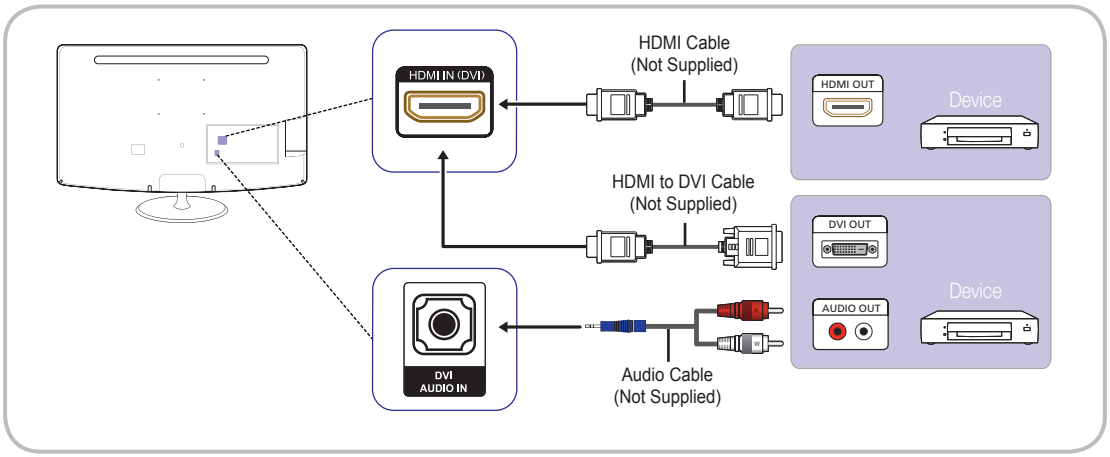
✎ If you forget the PIN code, press the remote control buttons in the following sequence in Standby mode, which resets the PIN to "0-0-0-0": POWER (off) → MUTE → 8 → 2 → 4 → POWER (on).

Connections

Connecting to an AV Device

Using an HDMI or an HDMI to DVI Cable: HD connection (up to 1080p)

Available devices: DVD, Blu-ray player, HD cable box, HD STB (Set-Top-Box) satellite receiver.



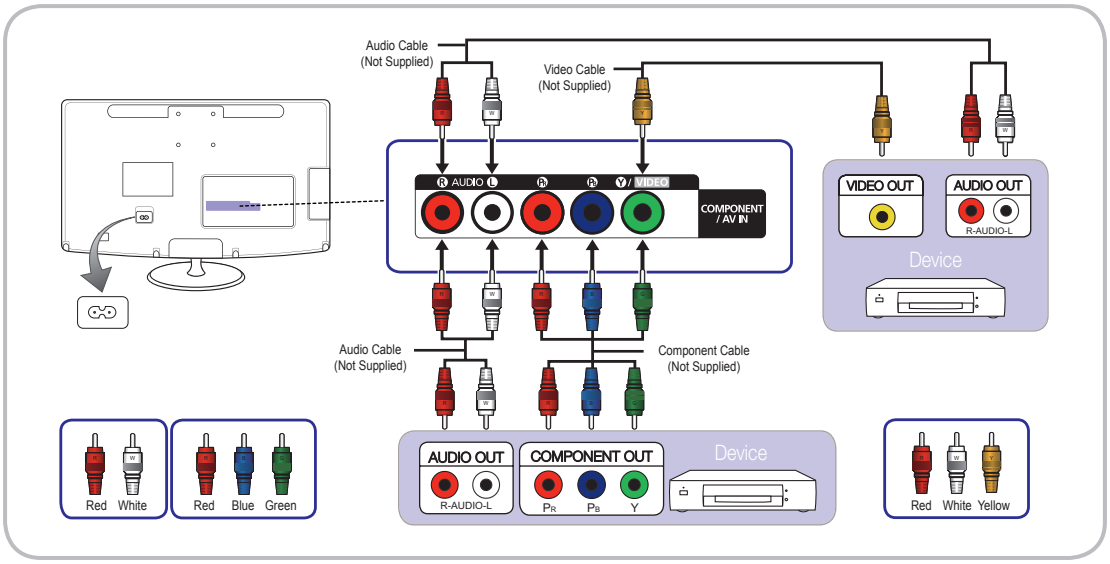
✎ HDMI IN (DVI)/DVI AUDIO IN

- For better picture and audio quality, connect to a digital device using an HDMI cable.
- An HDMI cable supports digital video and audio signals, and does not require an audio cable.
  - If an HDMI to DVI cable is connected to the **HDMI IN (DVI)** port, the audio does not work.
- The picture may not display normally (if at all) or the audio may not work if an external device that uses an older version of HDMI mode is connected to the TV. If such a problem occurs, ask the manufacturer of the external device about the HDMI version and, if out of date, request an upgrade.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- A basic high-speed HDMI cable or one with ethernet is recommended. This product does not support the ethernet function via HDMI.

Connections

Using a Component (up to 1080p) or Audio/Video (480i only) Cable

Available devices: DVD, Blu-ray player, cable box, STB satellite receiver, VCR



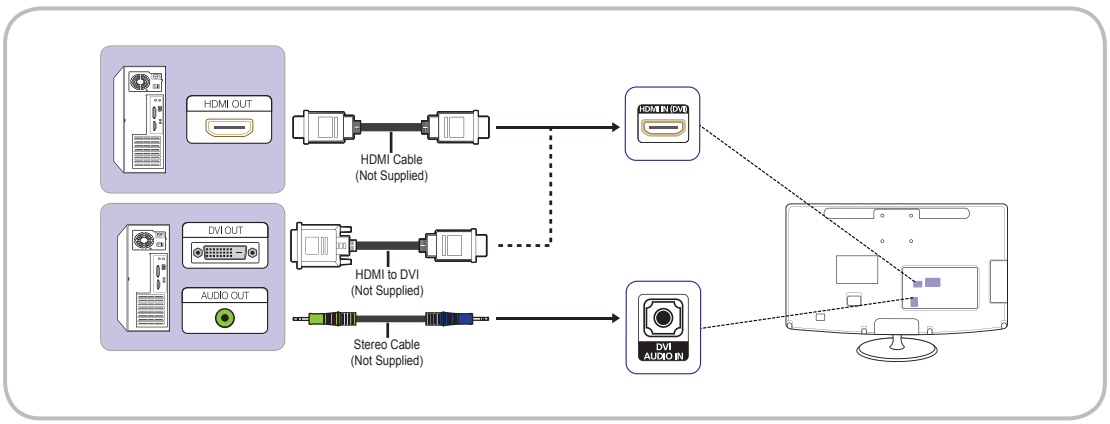
✎ When connecting to **AV IN**, the color of the **AV IN [Y/VIDEO]** jack (green) will not match the video cable (yellow).

✎ To obtain the best picture quality, the Component connection is recommended over the A/V connection.

Connecting to a PC

Using an HDMI cable or an HDMI to DVI cable

✎ Connecting through the HDMI cable may not be supported depending on the PC.



Connections

Display Modes (HDMI/DVI Input)

Optimal resolution : 1920 X 1080 pixels @60Hz

Display Mode			Horizontal Frequency (kHz)	Vertical Frequency(Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
Mode	Resolution					
IBM	720 x 400	70Hz	31.469	70.087	28.322	-/+
VESA DMT	640 x 480	60Hz	31.469	59.940	25.175	-/-
MAC	640 x 480	67Hz	35.000	66.667	30.240	-/-
VESA DMT	640 x 480	72Hz	37.861	72.809	31.500	-/-
VESA DMT	640 x 480	75Hz	37.500	75.000	31.500	-/-
VESA DMT	800 x 600	60Hz	37.879	60.317	40.000	+/+
VESA DMT	800 x 600	72Hz	48.077	72.188	50.000	+/+
VESA DMT	800 x 600	75Hz	46.875	75.000	49.500	+/+
MAC	832 x 624	75Hz	49.726	74.551	57.284	-/-
VESA DMT	1024 x 768	60Hz	48.363	60.004	65.000	-/-
VESA DMT	1024 x 768	70Hz	56.476	70.069	75.000	-/-
VESA DMT	1024 x 768	75Hz	60.023	75.029	78.750	+/+
VESA DMT	1152 x 864	75Hz	67.500	75.000	108.000	+/+
MAC	1152 x 870	75Hz	68.681	75.062	100.000	-/-
VESA DMT	1280 x 720	60Hz	45.000	60.000	74.250	+/+
VESA DMT	1280 x 800	60Hz	49.702	59.810	83.500	-/+
VESA DMT	1280 x 1024	60Hz	63.981	60.020	108.000	+/+
VESA DMT	1280 x 1024	75Hz	79.976	75.025	135.000	+/+
VESA DMT	1366 x 768	60Hz	47.712	59.790	85.500	+/+
VESA DMT	1440 x 900	60Hz	55.935	59.887	106.500	-/+
VESA DMT	1600 x 900RB	60Hz	60.000	60.000	108.000	+/+
VESA DMT	1680 x 1050	60Hz	65.290	59.954	146.250	-/+
VESA DMT	1920 x 1080	60Hz	67.500	60.000	148.500	+/+

✎ NOTE

- The interlace mode is not supported.
- The set may operate abnormally if a non-standard video format is selected.
- Separate and Composite modes are supported. SOG(Sync On Green) is not supported.

Connections

Changing the Input Source

Source

SOURCE → **Source**

Use to select TV or an external input sources such as a DVD / Blu-ray player / cable box / STB satellite receiver.

- **TV / HDMI/DVI / AV / Component / USB**

  ✎ You can only choose external devices that are connected to the TV. In the **Source**, connected inputs will be highlighted.

  ✎ In **Source**, **TV** always stay activated.

Edit Name

SOURCE → TOOLS → **Edit Name** → ENTER

In the **Source**, press the TOOLS button, and then you can set an external input sources name you want.

- **VCR / DVD / Cable STB / Satellite STB / PVR STB / AV Receiver / Game / Camcorder / PC / DVI PC / DVI Devices / TV / IPTV / Blu-ray / HD DVD / DMA**: Name the device connected to the input jacks to make your input source selection easier.

✎ When connecting a PC to the HDMI IN (DVI) port with HDMI cable, you should set the TV to PC mode under **Edit Name**.

✎ When connecting a PC to the HDMI IN (DVI) port with HDMI to DVI cable, you should set the TV to **DVI PC** mode under **Edit Name**.

✎ When connecting an AV devices to the HDMI IN (DVI) port with HDMI to DVI cable, you should set the TV to **DVI Devices** mode under **Edit Name**.

Information

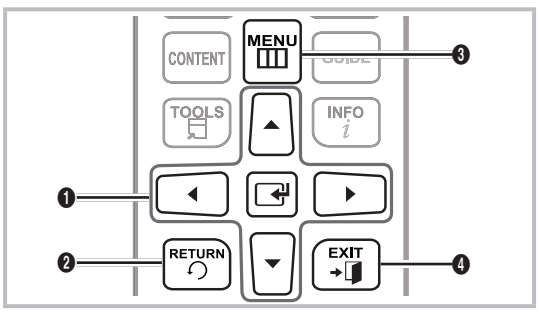
SOURCE → TOOLS → **Information** → ENTER

You can see detailed information about the selected external device.

Basic Features

How to Navigate Menus

Before using the TV, follow the steps below to learn how to navigate the menu and select and adjust different functions.



1. ENTER / Direction button: Move the cursor and select an item. Confirm the setting.
2. RETURN button: Returns to the previous menu.
3. MENU button: Displays the main on-screen menu.
4. EXIT button: Exits the on-screen menu.

How to Operate the OSD (On Screen Display)

The access step may differ depending on the selected menu.

1	MENU	The main menu options appear on the screen: **Picture, Sound, Channel, System, Support**.
2	▲ / ▼	Select an icon with the ▲ or ▼ button.
3	ENTER	Press ENTER to access the sub-menu.
4	▲ / ▼	Select the desired submenu with the ▲ or ▼ button.
5	◄ / ►	Adjust the value of an item with the ◄ or ► button. The adjustment in the OSD may differ depending on the selected menu.
6	ENTER	Press ENTER to confirm the selection.
7	EXIT	Press EXIT.

Basic Features

Using the INFO button (Now & Next guide)

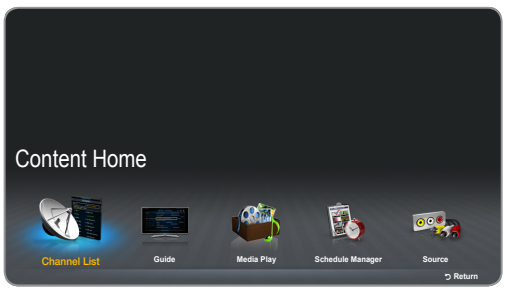
The display identifies the current channel and the status of certain audio-video settings.

The Now & Next guide shows daily TV program information for each channel according to the broadcasting time.

- Scroll ◀ / ▶ to view information for a desired program while watching the current channel.

Using the Channel Menu

Press the CONTENT button to select **Content Home**, and then select the menu you want to use. Each screen will be displayed.



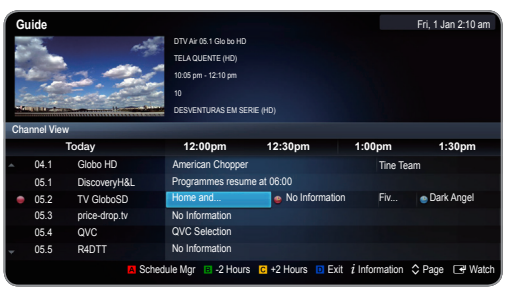
- **The displayed image may differ depending on the model.**

Guide

CONTENT → **Content Home** → **Guide** → ENTER

The EPG (Electronic Program Guide) information is provided by broadcasters. Using program schedules provided by broadcasters, you can specify programs you want to watch in advance so that the channel automatically changes to the selected program channel at the specified time. Program entries may appear blank or out of date depending on a channel status.

Using Channel View



- **The displayed image may differ depending on the model.**

✎ Using the operation buttons with the **Guide**.

- A Red (**Schedule Mgr**): Displays the **Schedule Manager**.
- B Green (**-2 Hours**): Viewing the list of program to be broadcasted before 2 hours.
- C Yellow (**+2 Hours**): Viewing the list of program to be broadcasted after 2 hours.
- D Blue (**Exit**): Exits the guide.
- *i* **Information**: Displays details of the selected program.
- ◇ (**Page**): Move to next or previous page.
- (**Watch / Schedule**)
  - When selecting the current programme, you can watch the selected programme.
  - When selecting the future programme, you can reserve to watch the selected programme. To cancel the schedule, press the ENTER button again and select **Cancel Schedules**.

Schedule Manager

CONTENT → **Content Home** → **Schedule Manager** → ENTER

You can view, modify or delete a Channel you have reserved to watch.

Using the Schedule Viewing

You can set a desired channel to be displayed automatically at the intended time.

You must set the current time first using the **Time** → **Clock** function in the **System** menu to use this function.

1. Press the ENTER button to select **Schedule Manager**.
2. Press A or TOOLS to add manual booking. The **Schedule Viewing** screen appears.
3. Press the ◀ / ▶ / ▲ / ▼ buttons to set **Antenna**, **Channel**, **Repeat**, **Date**, and **Start Time**.
   - **Antenna**: Select the desired broadcasting signal.
   - **Channel**: Select the desired channel.
   - **Repeat**: Select **Once, Manual, Sat~Sun, Mon~Fri** or **Everyday** to set at your convenience. If you select **Manual**, you can set the day you want.

     ✎ The ✓ mark indicates the date is selected.
   - **Date**: you can set desired date.
   - **Start Time**: You can set start time you want.

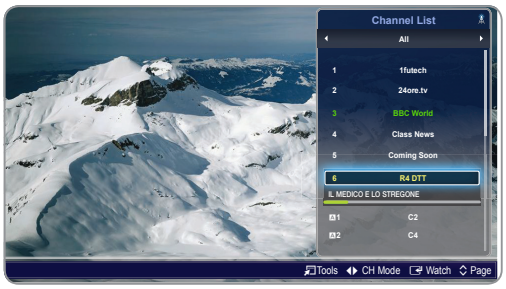
     ✎ On the **Information** screen, you can change or cancel a reserved information.
     - **Cancel Schedules**: Cancel a show you have reserved to watch.
     - **Edit Schedule**: Change a show you have reserved to watch.
     - **Return**: Return to the previous screen.

Basic Features

Channel List

CONTENT → **Channel List** → ENTER↵

You can view all the channel searched.



- **The displayed image may differ depending on the model.**

✎ When you press the CH LIST button on the remote control, **Channel List** screen will be displayed at once.

Using the operation buttons with the **Channel List**.

■ **(Tools)**: Press Tools button to check the following functions.

- **Program View**:Press the ▲/▼ buttons to select the desired programme, then press the ENTER↵ button. (Only for digital channel)
- **Edit Favorites**: Set channels you watch frequently as favorites.

  ✎ Select the **Edit Favorites**, then press the ENTER↵ button.

  – If the channel is already added to favourite channel, **Edit Favorites** will be shown.
- **Lock / Unlock**: Lock a channel so that the channel cannot be selected and viewed.

  ✎ This function is available only when the **Channel Lock** is set to **On**.

  ✎ The PIN input screen appears. Enter your 4-digit PIN, the default of which is "0-0-0-0". Change the PIN using the **Change PIN** option.
- **Channel Name Edit** (analog channels only): Assign your own channel name.
- **Delete**: You can delete a channel to display the channels you want.
- **Information**: Display the channel name, resolution, picture mode, language and so on.(Some just available for **DTV**)
- **Edit Mode**: You can select desired channels and edit it.
  - Using Option Menu in **Edit Mode**: Set each channel using the menu options (**Edit Favorites, Lock, Unlock, Delete,Deselect, Select All**).

    1. Press the TOOLS button in Channel List screen, then select the Edit Mode. A check box appears to the left of the channel.
    2. Press the ▲/▼ buttons to select the desired channel, and then press ENTER↵ button. The (✓) mark indicates the channel you've selected.

       ✎ You can select more than one channel.

       ✎ Press ENTER↵ button again to deselect the channel.
    3. Press the TOOLS button, then select a function and change its settings.

    - **Edit Favorites**: Set the selected channels you watch frequently as favorites.

      ✎ The **Edit Favorites** screen has five groups (**Favorites 1-5**). You can add a favourite channel to any one of the groups. Press the ▲/▼ buttons to select a group.
    - **Lock** / **Unlock**: Lock a channel so that the channel cannot be selected and viewed.

      ✎ This function is available only when the **Channel Lock** is set to **On**.

      ✎ The PIN input screen appears. Enter your 4-digit PIN. You can change the PIN number using **System** → **Security** → **Change PIN** menu.
    - **Delete**: Delete a channel.
    - **Deselect All**: Deselect the selected channels.
    - **Select All**: Select all the channels in the channel list.

■ ◀ ▶ **(Ch. Mode)**: Move to the type of channels you want to display on the **Channel List** screen.

✎ The option may differ depending on country.

■ ↵ **(Watch / Information)**: Watches the channel you select. / Displays details of the selected programme.

■ ◇ **(Page)**: Move to next or previous page.

How to use Schedule Viewing in Channel List (Digital Channels Only)

When you set the **Schedule Viewing** in **Channel List**, you can only set the programme in **Program View**.

1. Press the CH LIST button, then select a desired digital channel.
2. Press TOOLS button. and then select the **Program View.** The program list for that channel appears.
3. Press the ▲ / ▼ buttons to select the desired programme, then press the ↵ (**Information**) button.
4. Select **Schedule Viewing**, then press the ENTER↵ button when done.

✎ If you want to cancel **Schedule Viewing**, follow steps 1 through 3. Select **Cancel Schedule**.

Channel Menu

Memorizing Channels

MENU → Channel → ENTER

Antenna (Air / Cable) TOOLS

Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the TV.

✎ If the antenna is connected to ANT 1 IN (AIR), select **Air** and if it is connected to ANT 2 IN (CABLE), select **Cable**.

Auto Program

Automatically registers available **Air** / **Cable** channels to the TV.

- **Air**: **Air** antenna signal.
- **Cable**: **Cable** antenna signal.

Fine Tune

(analog channels only)

If the reception is clear, you do not have to fine tune the channel, as this is done automatically during the search and store operation. If the signal is weak or distorted, fine tune the channel manually. Scroll to the left or right until the image

is clear.

✎ Settings are applied to the channel you're currently watching.

✎ Fine tuned channels that have been saved are marked with an asterisk "*" on the right-hand side of the channel number in the channel banner.

✎ To reset the fine-tuning, select **Reset**.

Crosstalk Noise Reduction(Off/On)

(analog channels only)

This function reduce diagonal noise in picture caused by the crosstalk of signals. If your TV displays with a noise while watching TV, turns on this function.

Color System (Auto / PAL-M / PAL-N / NTSC)

Normally the TV can receive image and sound with good quality when in the mode auto. This mode detects the signal color system automatically. In case of some signal reception with color unsatisfactory, select the **Color System** mode to **Auto, PAL-M, PAL-N** or **NTSC**.

Picture Menu

Changing the Preset Picture Mode

MENU → Picture → Picture Mode → ENTER

Picture Mode TOOLS

Select your preferred picture type.

✎ When connecting a PC, the **Picture Mode** is only available the **Standard** and **Entertain**.

- **Dynamic**: Suitable for a bright room.
- **Standard**: Suitable for a normal environment.
- **Movie**: Suitable for watching movies in a dark room.
- **Entertain**: Suitable for watching movies and games.

  ✎ It is only available when connecting a PC.

Adjusting Picture Settings

MENU → Picture → ENTER

Samsung MagicAngle

Adjust screen viewing Angle to optimize screen quality according to your viewing position.

- **Samsung MagicAngle**: When viewing the screen at an angle from below or above by setting the appropriate mode for each position you can obtain a similar picture quality as viewing the screen directly from the front.
  - **Off**: Select when viewing from the front position.
  - **Lean Back Mode**: Select when viewing from a slightly lower position.
  - **Standing Mode**: Select when viewing from the upper position.
- **Mode**: Adjust screen viewing angle.

✎ When **Samsung MagicAngle** is set to **Lean Back Mode** or **Standing Mode**, **Gamma** is not available.

Backlight / Contrast / Brightness / Sharpness / Color / Tint (G/R)

Your television has several setting options for picture quality control.

✎ NOTE

- When connecting a PC, you can only make changes to **Backlight**, **Contrast**, **Brightness** and **Sharpness**.
- Settings can be adjusted and stored for each external device connected to the TV.
- Lowering picture brightness reduces power consumption.

Screen Adjustment

Screen Adjustment provides various picture size and aspect ratio options. Select an option using the up and down arrow keys, and the press ENTER↵. Use the arrow keys to select an option in the sub-menu, and then press ENTER↵.

■ **Picture Size**: Your cable box / satellite receiver may have its own set of screen sizes as well. However, we highly recommend you use **16:9** mode most of the time.

16:9: Sets the picture to 16:9 wide mode.

Zoom1: Use for moderate magnification.

Zoom2: Use for a stronger magnification.

Wide Fit: Enlarges the aspect ratio of the picture to fit the entire screen.

✎ Available with HD 1080i / 720p signals in 16:9 mode.

4:3: Sets the picture to basic (4:3) mode.

✎ Do not watch in 4:3 format for a long time. Traces of borders displayed on the left, right and center of the screen may cause image retention (screen burn) which are not covered by the warranty.

Screen Fit: Displays the full image without any cut-off when HDMI (720p / 1080i / 1080p) or Component (1080i / 1080p) signals are inputted.

■ **Position**: Adjusts the picture position. **Position** is only available if **Picture size** is set to **Zoom1**, **Zoom2**, **Wide Fit**, or **Screen Fit**.

✎ To use the **Position** function after selecting **Zoom1**, **Zoom2** or **Wide Fit**, follow these steps:

1. Press the ▼ button to select **Position**.
2. Press the ENTER↵ button.
3. Press the ▲ or ▼ button to move the picture up or down.
4. When done, Press the ENTER↵ button.

✎ If you want to reset the pictures to its original position, select **Reset** in the **Position** screen, and then press ENTER↵. The picture will be reset to its default position.

✎ To use the **Position** function after selecting **Screen Fit** when connected to an HDMI (1080i/1080p) or Component (1080i/1080p) source, follow these steps:

1. Press the ▼ button to select **Position**.
2. Press the ENTER↵ button.
3. Press the ▲, ▼, ◀ or ▶ button to move the picture.
4. When done, Press the ENTER↵ button.

✎ NOTE

- If you want to reset the pictures to its original position, select **Reset** in the **Position** screen. The picture will be set to its default position.
- HD (High Definition): 16:9 - 1080i / 1080p (1920x1080), 720p (1280x720)
- You can adjust and store settings for each external device you have connected to an input on the TV.
- Picture Sizes available by Input Source:

Input Source	Picture Size
ATV, AV, Component (480i, 480p)	**16:9**, **Zoom1**, **Zoom2**, **4:3**
DTV(1080i), Component (1080i, 1080p), HDMI (720p, 1080i, 1080p)	**16:9**, **Wide Fit**, **4:3**, **Screen Fit**

Using Your TV as a Computer (PC) Display

Setting Up Your PC Software (Based on Windows XP)

Depending on the version of Windows and the video card, the actual screens on your PC will probably look different, but the same basic set-up information will apply in most cases. (If not, contact your computer manufacturer or Samsung Dealer.)

1. Click on “Control Panel” on the Windows start menu.
2. Click on “Appearance and Themes” in the “Control Panel” window and a display dialog-box will appear.
3. Click on “Display” and a display dialog box will appear.
4. Navigate to the “Settings” tab on the display dialog-box.

- The correct size setting (resolution).
  [Optimum: 1920 x1080 pixels]
- If a vertical-frequency option exists on your display settings dialog box, the correct value is “60” or “60 Hz”. Otherwise, just click “OK” and exit the dialog box.

Maintaining the Correct Posture when Using this Product

Maintain the correct posture when using this product.

- Straighten your back.
- Keep a distance of 45~50 cm (15~19 inches) from your eyes to the screen. Look down at the screen and face the screen forwards.
- Adjust the angle of the product so that light is not reflected onto the screen.
- Keep your elbow at a right angle and keep your arm level with the back of your hand.
- Keep your elbow at a right angle.
- Place your heels flat on the ground while keeping your knees at an angle of 90 degrees or higher and maintain the position of your arm so that your arm is below your heart.

Changing the Picture Options

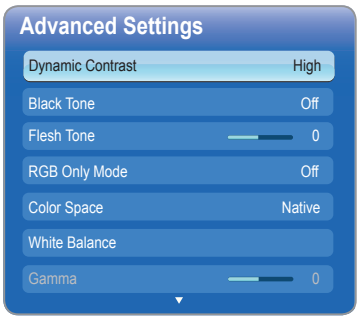
Advanced Settings

MENU → **Picture** → **Advanced Settings** → ENTER

(**Advanced Settings** are available in **Standard / Movie** mode)

Compared to previous models, new Samsung TVs have a more precise picture.

✎ When connecting a PC, you can only make changes to **Gamma** and **White Balance**.



- **Dynamic Contrast (Off / Low / Medium / High)**: Adjust the screen contrast.
- **Black Tone (Off / Dark / Darker / Darkest)**: Select the black level to adjust the screen depth.
- **Flesh Tone**: Emphasize pink “Flesh Tone.”
- **RGB Only Mode (Off / Red / Green / Blue)**: Displays the **Red, Green** and **Blue** color for making fine adjustments to the hue and saturation.
- **Color Space (Auto / Native)**: Adjust the range of colors available to create the image.
- **White Balance**: Adjust the color temperature for a more natural picture.

  R-Offset / G-Offset / B-Offset: Adjust each color's (red, green, blue) darkness.

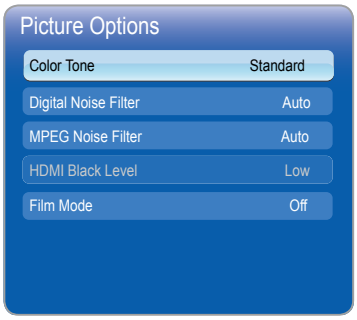
  R-Gain / G-Gain / B-Gain: Adjust each color's (red, green, blue) brightness.

  Reset: Resets the **White Balance** to it's default settings.
- **Gamma**: Adjust the primary color intensity.
- **Motion Lighting (Off / On)**: Reduce power consumption by brightness control.

  ✎ When changing a setting value of **Contrast**, **Motion Lightning** will be set to **Off**.

Picture Options

MENU → Picture → Picture Options → ENTER



- **Color Tone (Cool / Standard / Warm1 / Warm2)**
  - **Warm1** or **Warm2** will be deactivated when the picture mode is **Dynamic**.
  - Settings can be adjusted and stored for each external device connected to an input on the TV.
- **Digital Noise Filter (Off / Low / Medium / High / Auto / Auto Visualization)**: If the broadcast signal received by your TV is weak, you can activate the **Digital Noise Filter** feature to reduce any static and ghosting that may appear on the screen.
  - When the signal is weak, try other options until the TV displays.

  Auto Visualization: When changing analog channels, displays signal strength.
  - Only available for analog channels.
  - When bar is green, is that the best possible signal.
- **MPEG Noise Filter (Off / Low / Medium / High / Auto)**: Reduces MPEG noise to provide improved picture quality.
- **HDMI Black Level (Normal / Low)**: Selects the black level on the screen to adjust the screen depth.
  - Available only in **HDMI** mode.
- **Film Mode (Off / Auto1 / Auto2)**: Sets the TV to automatically sense and processes film signals from all sources and adjusts the picture for optimum quality.
  - Available in TV mode, HDMI (1080i).
  - If the screen does not seem natural, change its option to **Off** / **Auto1** / **Auto2** in **Film Mode**.

Reset Picture (Yes / No)

Resets your current picture mode to its default settings.

Sound Menu

Changing the Preset Sound Mode

MENU → Sound → Sound Mode → ENTER

Sound Mode TOOLS

- **Standard**: Selects the normal sound mode.
- **Music**: Emphasizes music over voices.
- **Movie**: Provides the best sound for movies.
- **Clear Voice**: Emphasizes voices over other sounds.
- **Amplify**: Increase the intensity of high-frequency sound to allow a better listening experience for the hearing impaired.

Adjusting Sound Settings

MENU → Sound → Sound Effect → ENTER

Sound Effect

(standard sound mode only)

- **SRS TruSurround HD (Off / On)**

This function provides a virtual 5.1 channel surround sound experience through a pair of speakers using HRTF(Head Related Transfer Function) technology.

- **SRS TruDialog (Off / On)**

This function allows you to increase the intensity of a voice over background music or sound effects so that dialog can be heard more clearly.

- **Equalizer**

Adjusts the sound mode.

- **Balance L/R**: Adjusts the balance between the right and left speaker.
- **100Hz / 300Hz / 1kHz / 3kHz / 10kHz** (Bandwidth Adjustment): Adjusts the level of specific bandwidth frequencies.
- **Reset**: Resets the equalizer to its default settings.

Sound Settings

MENU → Sound → ENTER

Broadcast Audio Options

- **Audio Language** (digital channels only): Change the default value for audio languages.

The available language may differ depending on the broadcast.

■ **Multi-Track Sound (MTS)**

(analog channels only)

– **Mono**: Choose for channels that are broadcasting in mono or if you are having difficulty receiving a stereo signal.

– **Stereo**: Choose for channels that are broadcasting in stereo.

– **SAP**: Choose to listen to the Separate Audio Program, which is usually a foreign-language translation.

• Depending on the particular program being broadcast, you can listen to **Mono**, **Stereo** or **SAP**.

Speaker Settings

■ **Auto Volume (Off / Normal / Night)**: To equalize the volume level on each channel, set to **Normal**.

Night: This mode provides an improved sound experience compared to **Normal** mode, making almost no noise. It is useful at night.

Reset Sound (Yes/No)

Reset all sound settings to the factory defaults.

System Menu

MENU → **System** → **Time** → ENTER

Time

■ **Clock**: Setting the clock is for using various timer features of the TV.

✎ The current time will appear every time you press the INFO button.

✎ If you disconnect the power cord, you have to set the clock again.

Clock Mode (Auto / Manual)

– **Auto**: Set the current time automatically using the time from a digital channel.

✎ The antenna must be connected in order to set the time automatically.

– **Manual**: Set the current time manually.

✎ Depending on the broadcast station and signal, the auto time set up may not be correct. In this case, set the time manually.

Clock Set: Set the Day, Month, Year, Hour, Minute and am/pm.

✎ Available only when **Clock Mode** is set to **Manual**.

✎ You can set the Day, Month, Year, Hour and Minute directly by pressing the number buttons on the remote control.

Time Zone: Select your time zone.

✎ This function is only available when the **Clock Mode** is set to **Auto**.

Using the Sleep Timer

■ **Sleep Timer** TOOLS : Automatically shuts off the TV after a preset period of time. (30, 60, 90, 120, 150 and 180 minutes).

✎ To cancel the **Sleep Timer**, select **Off**.

Setting the On / Off Timer

You can set the TV to turn on automatically at a preset time.

■ **On Timer 1 / On Timer 2 / On Timer 3**: Three different on timer settings can be made. You must set the clock first.

Setup: Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual** to set at you convenience. If you select **Manual**, you can set up the day you want to activate the timer.

✎ The ✓ mark indicates the day is selected.

Time: Set the hour, minute, and am/pm.

Volume: Set the desired volume level.

Source: Select the desired input source to be played when the TV is turned on automatically. (**USB** can be selected only when a USB device is connected to the TV)

Antenna (when the **Source** is set to **TV**): Select **Air** or **Cable**.

Channel (when the **Source** is set to **TV**): Select the desired channel.

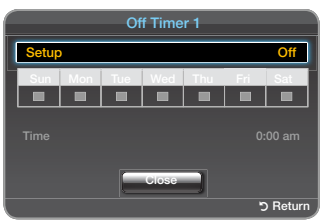
Music (when the **Source** is set to **USB**): Select a folder in the USB device containing music files to be played when the TV is turned on automatically.

Photos (when the **Source** is set to **USB**): Select a folder in the USB device containing photo files to be played when the TV is turned on automatically.

✎ **NOTE**

- If there is no music file on the USB device or the folder containing a music file is not selected, the Timer function does not operate correctly.
- When there is only one photo file in the USB, the Slide Show will not play.
- If a folder name is too long, the folder cannot be selected.
- Each USB you use is assigned its own folder. When using more than one of the same type of USB, make sure the folders assigned to each USB have different names.
- It is recommended that you use a USB memory stick and a multi card reader when using **On Timer**. The **On Timer** function may not work with USB devices with a built-in battery, MP3 players, or PMPs made by some manufacturers because these devices take a long time to be recognized.

■ **Off Timer 1 / Off Timer 2 / Off Timer 3**: Three different off timer settings can be made. You must set the clock first.



Setup: Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual** to set at you convenience. If you select **Manual**, you can set up the day you want to activate the timer.

✎ The ✓ mark indicates the day is selected.

Time: Set the hour, minute, and am/pm.

Locking Programs

MENU → **System** → **Security** → ENTER

Security

✎ The PIN input screen appears, Enter your 4 digit PIN number.

✎ The default PIN number of a new TV set is “0-0-0-0”.

■ **Channel Lock (Off / On)**: Lock channels, to prevent unauthorized users, such as children, from watching unsuitable program.

✎ Available only when the Input **Source** is set to **TV**.

■ **Program Rating Lock**: Prevent unauthorized users, such as children, from watching unsuitable program with a user-defined 4-digit PIN code. If selected channel is locked, the “🔒” symbol will be displayed.

■ **Change PIN**: The Change PIN screen will appear. Choose any 4 digits for your PIN and enter them. As soon as the 4 digits are entered, the **Confirm New PIN** screen appears. Re-enter the same 4 digits. When the Confirm screen disappears, your PIN has been memorized.

✎ If you forget the PIN, press the remote-control buttons in the following sequence, which resets the pin to “0-0-0-0”: POWER (off) → MUTE → 8 → 2 → 4 → POWER (on).

Economical Solutions

MENU → **System** → **Eco Solution** → ENTER

Eco Solution

■ **Energy Saving (Off / Low / Medium / High / Picture Off)**: This adjusts the brightness of the TV in order to reduce power consumption. If you select **Picture Off**, the screen is turned off, but the sound remains on. Press any button except volume button to turn on the screen.

■ **No Signal Power Off (Off / 15 min. / 30 min. / 60 min.)**: To avoid unnecessary energy consumption, set how long you want the TV to remain on if it’s not receiving a signal.

✎ Disabled when the PC is in power saving mode.

■ **Auto Power Off (Off / On)**: Saves power by turning TV off automatically when no user operation is received for 4 hours.

Other Features

MENU → System → ENTER

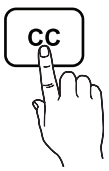
Menu Language

Set the menu language.

1. Select **Menu Language** and press the ENTER button.
2. Choose desired language and press the ENTER button.

Caption

(On-Screen Text Messages)



- **Caption (Off / On)**: You can switch the caption function on or off. If captions are not available, they will not be displayed on the screen.

  ✎ The Caption feature doesn't work in **Component, HDMI**

- **Caption Mode**: You can select the desired caption mode.

  ✎ The availability of captions depends on the program being broadcast.

  CC1~CC4 / Text1~Text4: (analog channels only) The Analog Caption function operates in either analog TV channel mode or when a signal is supplied from an external device to the TV. (Depending on the broadcasting signal, the Analog Caption function may or may not work with digital channels.)

Auto Protection Time

- **Off / 2 hours / 4 hours / 8 hours / 10 hours**: If the screen remains idle with a still image for a certain period of time defined by the user, the screen saver is activated to prevent the formation of ghost images on the screen.

General

- **Game Mode (Off / On)**: When connecting to a game console such as PlayStation™ or Xbox™, you can enjoy a more realistic gaming experience by selecting the game menu.

✎ NOTE

- Precautions and limitations for game mode
  - To disconnect the game console and connect another external device, set **Game Mode** to **Off** in the setup menu.
  - If you display the TV menu in **Game Mode**, the screen shakes slightly.
- **Game Mode** is not available when the input source is set to **TV**.
- After connecting the game console, set **Game Mode** to **On**. Unfortunately, you may notice reduced picture quality.
- If **Game Mode** is **On**:
  - **Picture** mode is set to **Standard** and **Sound** mode is set to **Movie**.

- **Panel Lock**: Lock or unlock all the keys on the front panel at once. When Panel Lock is on, none of the keys on the front panel operate.
- **Boot Logo (Off / On)**: Display Samsung logo when the TV is turned on.
- **AV Color System (Auto / PAL-M / PAL-N / NTSC)**: Normally the TV can receive image and sound with good quality when in the mode **Auto**. This mode detects the signal color system automatically. In case of some signal reception with color unsatisfactory, select the **AV Color System** mode to **Auto, PAL-M, PAL-N** or **NTSC**.

Picture In Picture (PIP)

MENU → System → PIP → ENTER

PIP TOOLS

You can watch the TV tuner and one external video source simultaneously. **PIP** (Picture-in-Picture) does not function in the same mode.

✎ NOTE

- For PIP sound, refer to the **Sound Select** instructions.
- If you turn the TV off while watching in **PIP** mode, the PIP window will disappear.
- You may notice that the picture in the PIP window becomes slightly unnatural when you use the main screen to view a game or karaoke.
- While **Program Rating Lock** is in operation, the PIP function cannot be used.
- PIP Settings

Main picture	Sub picture
Component, HDMI/DVI	TV

- **PIP (Off / On)**: Activate or deactivate the PIP function.
- **Air / Cable (Air / Cable)**: Select either **Air** or **Cable** as the input source for the sub-screen.
- **Channel**: Select the channel for the sub-screen.
- **Size (/)**: Select a size for the sub-picture.
- **Position (/ / /)**: Select a position for the sub-picture.
- **Sound Select (Main / Sub)**: You can choose the desired sound (**Main / Sub**) in **PIP** mode.

DivX® Video On Demand

Shows the registration code authorized for the TV. If you connect to the DivX web site and register, you can download the VOD registration file. If you play the VOD registration using Media Play, the registration is completed.

✎ For more information on DivX® VOD, visit "http://vod.divx.com".

Basic Features

Support Menu

MENU → **Support** → ENTER

Self Diagnosis

Self Diagnosis might take few seconds, this is part of the normal operation of the TV.

- **Picture Test**: Use to check for picture problems.

  Yes: If the test pattern does not appear or there is noise in the test pattern, select **Yes**. There may be a problem with the TV. Contact Samsung's Call Center for assistance.

  No: If the test pattern is properly displayed, select **No**. There may be a problem with your external equipment. Please check your connections. If the problem persists, refer to the external device's user manual.

- **Sound Test**: Use the built-in melody sound to check for sound problems.

  Yes: If you can hear sound only from one speaker or not at all during the sound test, select **Yes**. There may be a problem with the TV. Contact Samsung's Call Center for assistance.

  No: If you can hear sound from the speakers, select **No**. There may be a problem with your external equipment. Please check your connections. If the problem persists, refer to the external device's user manual.

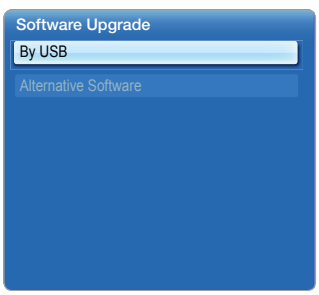
- **Signal Information**: (digital channels only) An HD channel's reception quality is either perfect or the channels are unavailable. Adjust your antenna to increase signal strength.
- **Reset**: Restores all settings to factory defaults.

Software Upgrade

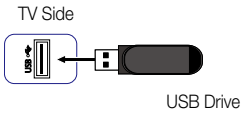
Software Upgrade can be performed downloading the latest firmware from "www.samsung.com," to a USB memory device.

Current Version - the software already installed in the TV.

Software is represented as "Year/Month/Day_Version."



Installing the Latest Version



- **By USB**: Insert a USB drive containing the firmware upgrade file, downloaded from "www.samsung.com," into the TV. Please be careful not to disconnect the power or remove the USB drive until upgrades are complete. The TV will be turned off and on automatically after completing the firmware upgrade. When software is upgraded, video and audio settings you have made will return to their default settings. We advise you to write down your settings so that you can easily reset them after the upgrade.
- **Alternative Software:** Replace the current software with the alternative.

Contact Samsung

View this information when your TV does not work properly or when you want to upgrade the software. You can find information regarding our call centers and how to download products and software.

Contents Home

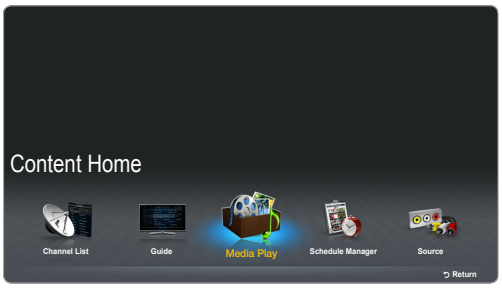
You can enjoy useful and various contents.

Advanced Features

Using the Media Play

Enjoy videos, photos, music files saved on a USB Mass Storage Class (MSC) device.

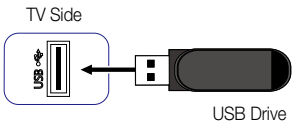
1. Press the CONTENT button to select **Media Play**.
2. Press the u or d button to select the desired type of content (**Videos, Photos, Music**). Next, press the Enter button.
3. Press ▲ / ▼ button to select desired device, then press the Enter button again.



- **The displayed image may differ depending on the model.**

Connecting a USB Device

1. Turn on your TV.
2. Connect a USB device containing photo and music files to the USB jack on the side of the TV.
3. When USB is connected to the TV, popup window appears. Then you can select **Videos, Photos** or **Music** directly.



✎ It might not work properly with unlicenced multimedia files.

✎ Need-to-Know List before using **Media Play**.

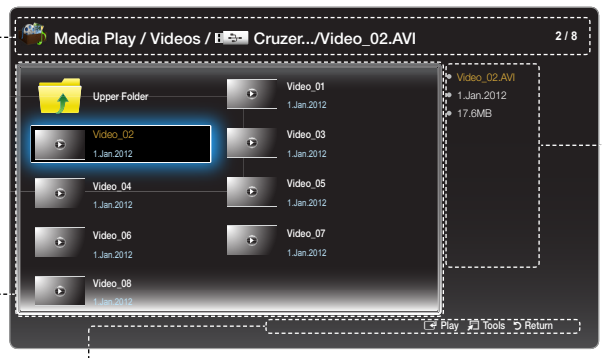
- MTP (Media Transfer Protocol) is not supported.
- The file system supports FAT16, FAT32 and NTFS.
- Certain types of USB Digital camera and audio devices may not be compatible with this TV.
- **Media Play** only supports USB Mass Storage Class (MSC) devices. MSC is a Mass Storage Class Bulk-Only Transport device. Examples of MSC are Thumb drives, Flash Card Readers (USB HUB are not supported). Devices should be connected directly to the TV's USB port.
- USB (HDD) is not supported.
- Before connecting your device to the TV, please back up your files to prevent them from damage or loss of data. SAMSUNG is not responsible for any data file damage or data loss.
- Do not disconnect the USB device while it is loading.
- The higher the resolution of the image, the longer it takes to display on the screen.
- The maximum supported JPEG resolution is 15360X8640 pixels.
- For unsupported or corrupted files, the "Not Supported File Format" message is displayed.
- MP3 files with DRM that have been downloaded from a non-free site cannot be played. Digital Rights Management (DRM) is a technology that supports the creation, distribution and management of the content in an integrated and comprehensive way, including the protection of the rights and interests of the content providers, the prevention of the illegal copying of contents, as well as managing billings and settlements.
- If more than two MSC devices are connected, some of them may not be recognized. A USB device that requires high power (more than 500mA or 5V) may not be supported.
- If an over-power warning message is displayed while you are connecting or using a USB device, the device may not be recognized or may malfunction.

Advanced Features

- If the TV has been no input during time set in **Auto Protection Time**, the Screensaver will run.
- The power-saving mode of some external hard disk drives may be released automatically when connected to the TV.
- If a USB extension cable is used, the USB device may not be recognized or the files on the device may not be read.
- If a USB device connected to the TV is not recognized, the list of files on the device is corrupted or a file in the list is not played, connect the USB device to the PC, format the device and check the connection.
- **Media Play** only supports sequential jpeg format.

Screen Display

Move to the desired file using the ▲ / ▼ / ◀ / ▶ buttons and then press the ENTER button. The file is played. **Media Play** screen may differ depending on the way to enter the screen.



Information: Displays the selected content category (Music, for example), device (USB drive,for example), folder/file name and page.

Displays the selected file information.

Contents mode: You can select the desired Content Category.

- **The displayed image may differ depending on the model.**

Operation Buttons

- C Turn to the previous page. Only available in **Music**.
- B Turn to the next page. Only available in **Music**.
- **Play**: Play the selected file.
- **Tools**: Displays the option menu.
- **Return**: Move to the previous step.

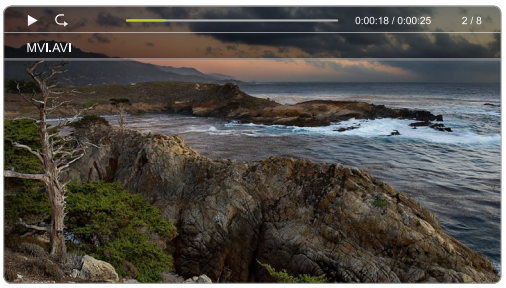
Advanced Features

Videos

Playing Video

1. Press the ◀ / ▶ / ▲ / ▼ button to select the desired video in the file list.
2. Press the ENTER↵ button or ► (Play) button.
   - The selected file name is displayed on the top with its playing time.
   - If video time information is unknown, play time and progress bar are not displayed.
   - During video playback, you can search using ◀ and ▶ button.
   - You can use ◄◄ (REW) and ►► (FF) buttons during playback.

   ✎ In this mode, you can enjoy movie clips contained on a Game, but you cannot play the Game itself.



- **The displayed image may differ depending on the model.**

Supported Subtitle Formats

– **External**

Name	Extension
MPEG-4 time-based text	.ttxt
SAMI	.smi
SubRip	.srt
SubViewer	.sub
Micro DVD	.sub or .txt
SubStation Alpha	.ssa
Advanced SubStation Alpha	.ass
Powerdivx	.psb

– **Internal**

Name	Container	Format
Xsub	AVI	Picture Format
SubStation Alpha	MKV	Text Format
Advanced SubStation Alpha	MKV	Text Format
SubRip	MKV	Text Format
MPEG-4 Timed text	MP4	Text Format

Supported Video Formats

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
*.avi *.mkv *.asf *.wmv *.mp4 *.3gp *.vro *.mpg *.mpeg *.ts *.tp *.trp *.m2ts *.mts *.divx	AVI MKV ASF MP4 3GP VRO VOB PS TS	DivX 3.11 / 4.x / 5.1 / 6.0	1920x1080	6 ~ 30	30	AC3 LPCM ADMPCM (IMA, MS) AAC HE-AAC WMA DD+ MPEG(MP3) DTS Core
		MPEG4 SP / ASP				
		H.264 BP / MP / HP				
		Motion JPEG	640x480		8	
		Window Media Video v9	1920x1080		30	
		MPEG2				
		MPEG1				

Other Restrictions

NOTE

- Video content will not play, or not play correctly, if there is an error in the content or the container.
- Sound or video may not work if the contents have a standard bit rate/frame rate above the compatible Frame/sec listed in the table above.
- If the Index Table is in error, the Seek (Jump) function is not supported.
- When playing the video through network, it may not work depending on the network status. When you play video over a network connection, the video may not be played smoothly.
- The menu can be displayed late if the video is over 10Mbps(bit rate).
- Some USB/digital camera devices may not be compatible with the player.
- Video content can not be played if there are many contents in one file.

Video decoder	Audio decoder
• Supports up to H.264, Level 4.1 • H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported. • GMC 2 over is not supported.	• Supports up to WMA 7, 8, 9 STD, 9, 10 PRO. • WMA lossless, audio lossless and audio are not supported. • WMA sampling rate of 22050Hz mono is not supported.

Photos

Viewing a Photo (or Slide Show)

1. Press the ▲ / ▼ / ◀ / ▶ button to select the desired photo in the file list.
2. Press the ENTER button.
   - When a selected photo is displayed, press the ENTER button to start the slide show.
   - During the slide show, all files in the file list will be displayed in order.

Music files can be automatically played during the Slide Show if the **Background Music On** is set.

The **Background Music** cannot be changed until the BGM has finished loading.

• **The displayed image may differ depending on the model.**

Supported Photo Formats

File Extension	Type	Resolution
*.jpg	JPEG	15360 x 8640
*.bmp	BMP	1920 x 1080
*.mpo	MPO	15360 x 8640

Advanced Features

Music

Playing Music

1. Press the ▲ or ▼ button to select a music file from the list.
2. Press the Enter button or ► (Play) button. The music file will be played.
   - To rewind or fast-forward during playback, press the ◄◄(Rewind) or ►► (Fast-forward) button.
   - To move to another page, press the B **Page Down** or C **Page Up** button.

   ✎ Only displays the files with the file extension in following supported music formats list.

   ✎ If there are issues with the sound quality of an MP3 file, go to **Sound** and adjust the **Equalizer**. (There may be sound quality issues with over-modulated MP3 files.)

- **The displayed image may differ depending on the model.**

Playing selected music files

1. Press the Tools button to select **Selection Play**.
2. Select music files.

   ✎ The ✓ mark will appear to the left of the selected files.

   ✎ To select or deselect all files, press **Select All** or **Deselect All**.
3. Press the ► button to select the **Play** button.
4. The selected files will be played in sequence.

Using the playback menu

Press the ◄/► button to select the desired menu.

- **Play** / **Pause**: You can start or stop a music.
- **Repeat Mode** (**Off** / **One Song** / **All**): You can play music files repeatedly.
- **Shuffle Mode** (**Off** / **On**): You can play the music randomly.
- **Sound Mode** (**Standard** / **Music** / **Movie** / **Clear Voice** / **Amplify**): You can adjust the sound setting.

Supported Music Formats

File Extension	Type	Codec
*.mp3	MPEG	MPEG1 Audio Layer 3
*.m4a *.mpa *.aac *.3ga	MPEG4	AAC
*.fl ac	FLAC	FLAC
*.ogg	OGG	Vorbis
*.wma	WMA	WMA

Media Play - Additional Functions

Videos/Photos/Music Play Option menu

Press the TOOLS button and select selection play.

Option	Function	Videos	Photos	Music
Title Search	Directly access another file.	✓		
Time Search	Navigate scenes in a video at one minute intervals by pressing the ◀ or ▶ button. Alternatively, navigate scenes by entering the time manually.	✓		
Shuffle Mode	You can play the music randomly.			✓
Repeat Mode	Play a video or music file repeatedly.	✓		✓
Picture Size	Adjust the picture size according to your preference.	✓		
Picture Mode	Change the **Picture Mode** setting.	✓	✓	
Sound Mode	Change the **Sound Mode** setting.	✓	✓	✓
Subtitle	You can set the subtitle **On** / **Off**.	✓		
Subtitle Settings	Play a video file with captions displayed. This option is available only when the caption file name matches the video file name.	✓		
Audio Language	View a video in a supported language of your choice. The option is available only when a stream-type file that supports multiple audio formats is played.	✓		
Start Slide Show / Stop Slide Show	Start or pause a slideshow.		✓	
Slide Show Speed	Specify the slideshow speed when viewing a slideshow.		✓	
Background Music On / Backgroud Music Off	Enable/disable the background music when viewing a slideshow.		✓	
Background Music Setting	Specify the background music when viewing a slideshow		✓	
Zoom	Zoom in to maximize the picture to the full screen.		✓	
Rotate	Rotate the picture.		✓	
Selection Play	Select and play multiple files.	✓	✓	✓
Information	View detailed information about files that were played.	✓	✓	✓

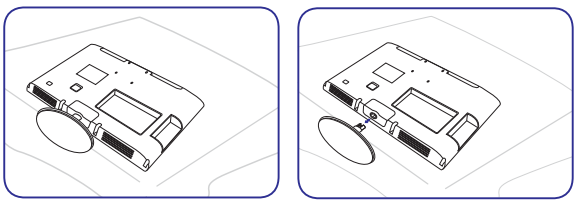
✎ To view information about a device, select the device name and press the TOOLS button.

✎ To view information about a file, select the file and press the TOOLS button.

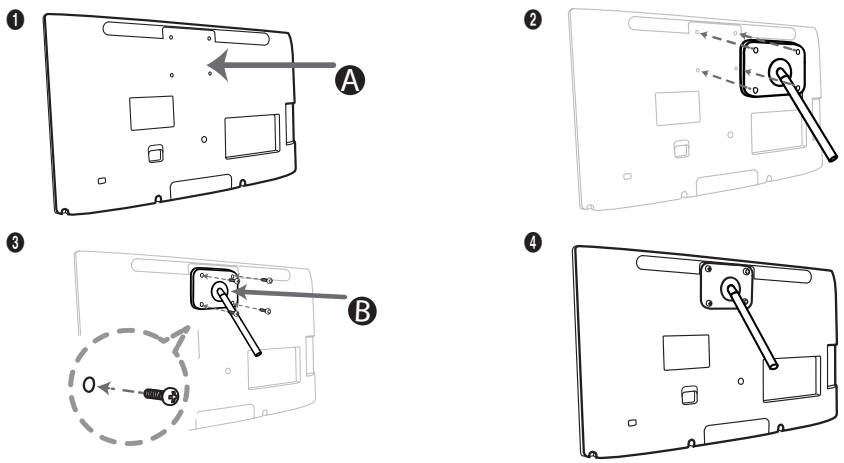
Attaching a Wall Mount/Desktop Stand

Preparing before installing Wall-Mount/Desktop Stand

1. Turn the product off and unplug the power cord from the wall outlet.
2. Place a soft cloth or cushion on a flat surface to protect the panel and place the product face down.
3. Hold the main body of the product with your hand. Pull the stand in the direction of the arrow as shown in the figure to separate it.



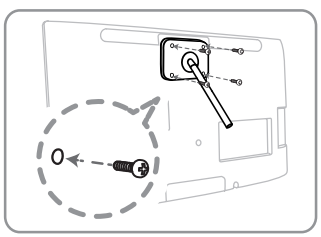
Attaching a Wall Mount/Desktop Stand



A Wall/Desktop Stand Mount

B Wall mount kit/desktop stand (not supplied)

⚠ Caution



Important

For the installation of Wall-mount, please don't use screws longer than 14mm(L14) of longitude.

4. Align wall mount/desktop stand to the Monitor/TV and firmly fix the wall mount/desktop stand by fastening the screw.
5. Align the groove of the part of the product that is to be connected to the stand with the groove in the stand (desk-top stand, wall mount stand or another stand) and firmly fix the stand by fastening the screw.

✎ NOTE

- If you use screws that are longer than the standard specifications, the inside of the product may be damaged.
- For wall mounts that are not compatible with the standard VESA specifications, the length of the screw may differ depending on the corresponding specifications.

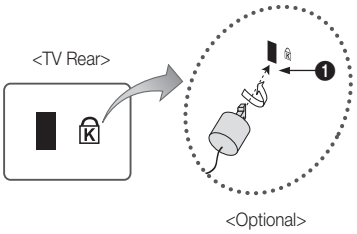
Other Information

- Avoid using screws that are incompatible with the standard VESA specifications and avoid assembling them using excessive force. This may result in damage to the product or injury due to the product falling. Samsung shall not be held liable for any damage or injury.
- Samsung shall not be held liable for any damage to the product or injury caused by using a wall mount/desktop stand that is not compatible with the specifications or due to an installation not performed by an authorized installation engineer.
- When installing the product using a wall mount, purchase a wall mount that provides at least 10 cm (3.93 inches) of space from the wall.
- Use the wall mount according to the international specifications.

Anti-theft Kensington Lock

The Kensington Lock is not supplied by Samsung. It is a device used to physically fix the system when using it in a public place. The appearance and locking method may differ from the illustration depending on the manufacturer. Refer to the manual provided with the Kensington Lock for additional information on proper use.

✎ Please find a "🔒" icon on the rear of the TV. A kensington slot is beside the "🔒" icon.



To lock the product, follow these steps:

1. Wrap the Kensington lock cable around a large, stationary object such as desk or chair.
2. Slide the end of the cable with the lock attached through the looped end of the Kensington lock cable.
3. Insert the locking device into the Kensington slot on the product ❶.
4. Lock the lock.

✎ These are general instructions. For exact instructions, see the User manual supplied with the locking device.

✎ The locking device has to be purchased separately.

✎ The location of the Kensington slot may be different depending on the TV model.

Other Information

Troubleshooting

If the TV seems to have a problem, first try this list of possible problems and solutions. If none of these troubleshooting tips apply, visit "www.samsung.com," then click on Support, or contact a Samsung customer service center.

Issues	Solutions and Explanations
Poor picture	First of all, please perform the **Picture Test** and confirm that your TV is properly displaying the test image. • go to MENU - **Support** - **Self Diagnosis** - **Picture Test** If the test image is properly displayed, the poor picture may be caused by the source or signal.
The TV image does not look as good as it did in the store.	• If you have an analog Cable/Set top box, upgrade to a digital set top box. Use HDMI to deliver HD (high definition) picture quality. • Cable/Satellite subscribers: Try HD stations from the channel line up. • Air/Cable Antenna connection: Try HD stations after performing Auto program. ✎ Many HD channels are up scaled from SD(Standard Definition) contents. • Adjust the Cable / Set top box video output resolution to 1080i or 720p.
The picture is distorted: macroblock error, small block, dots, pixelization.	• Compression of video contents may cause picture distortion, especially in fast moving pictures such as sports and action movies. • Low signal level can cause picture distortion. This is not a TV problem. • Mobile phones used close to the TV (up to 3.3 ft) may cause noise in picture on analog and digital TV.
There is poor color or brightness.	• Adjust the Picture options in the TV menu. (go to **Picture Mode** / **Color** / **Brightness** / **Sharpness**) • Adjust **Energy Saving** option in the TV menu. (go to MENU - **System** - **Eco Solution** - **Energy Saving**) • Try resetting the picture to view the default picture setting. (go to MENU - **Picture** - **Reset Picture**)
There is a dotted line on the edge of the screen.	• If the picture size is set to **Screen Fit**, change it to **16:9**. • Change cable/Set top box resolution.
The picture is black and white.	• If you are using an AV composite input, connect the video cable (yellow) to the Green jack of component input on the TV.
When changing channels, the picture freezes or is distorted or delayed.	• If connected to a cable box, please try to reset it. (reconnect the AC cord and wait until the cable box reboots. It may take up to 20 minutes) • Set output resolution of the cable box to 1080i or 720p.
Sound Problem	First of all, please perform the **Sound Test** to confirm that your TV audio is properly operating. • go to MENU - **Support** - **Self Diagnosis** - **Sound Test** If the audio is **OK**, the sound problem may caused by the source or signal.
There is no sound or the sound is too low at maximum volume.	• Please check the volume of the device (Cable/Sat Box, DVD, Blu-ray etc) connected to your TV.
The picture is good but there is no sound.	• If you are using a DVI to HDMI cable, TV set not support audio. • Reboot the connected device by reconnecting the device's power cable.
The speakers are making an inappropriate noise.	• For Antenna or Cable connections, check the signal information. Low signal level may cause sound distortion. • Perform the **Sound Test** as explained above.
No Picture, No Video	
The TV will not turn on.	• Make sure the AC power cord is securely plugged into the wall outlet and the TV. • Make sure the wall outlet is working. • Try pressing the POWER button on the TV to make sure the problem is not the remote control. If the TV turns on, refer to 'Remote control does not work' below.
The TV turns off automatically.	• Ensure the **Sleep Timer** is set to **Off** in the **System** menu. • Make sure the AC power cord is plugged in securely to the wall outlet and the TV. • When watching TV from an antenna or cable connection, the TV will turn off after 15 - 60 minutes if there is no signal.
There is no picture/video.	• Check cable connections. (remove and reconnect all cables connected to the TV and external devices). • Set your external device's (Cable/Set top box, DVD, Blu-ray etc) video outputs to match the connections to the TV input. For example, if an external device's output is HDMI, it should be connected to an HDMI input on the TV. • Make sure your connected devices are powered on. • Be sure to select the TV correct source by pressing the SOURCE button on the remote control. • Reboot the connected device by reconnecting the device's power cable.

Other Information

Issues	Solutions and Explanations
RF(Cable/Antenna) Connection	
The TV is not receiving all channels.	• Make sure the coaxial cable is connected securely. • Please try **Auto Program** to add available channels to the channel list. go to MENU - **Channel** - **Auto Program** then select **Auto** and make sure the correct Cable TV signal type is set in the menu. • Verify the Antenna is positioned correctly.
No Caption on digital channels.	• Check Caption **System** menu. • Some channels may not have caption data.
The picture is distorted: macroblock, error, small block, dots, pixelization.	• Compression of video contents may cause picture distortion. especially on fast moving pictures such as sports and action movies. • A low signal can cause picture distortion. This is not a TV problem.
Others	
Purple/green rolling horizontal bars and buzzing noise from the TV speakers with Component cable connection.	• Remove the left and right audio connections from the set-top-box. If the buzzing stops, this indicates that the set-top-box has a grounding issue. Replace the Component video cables with an HDMI connection.
The picture will not display in full screen.	• HD channels will have black bars on either side of the screen when displaying up scaled SD (4:3) contents. • Black bars on Top & Bottom will be shown on movies that have aspect ratios different from your TV. • Adjust picture size option on your external device or TV to full screen.
The remote control does not work.	• Replace the remote control batteries with correct polarity (+/–). • Clean the transmission window located on the top of the remote control. • Try pointing the remote control directly at the TV from 5~6 feet away.
The cable/set top box remote control does not turn the TV on or off, or adjust the volume.	• Program the Cable/Set top box remote control to the operate the TV. Refer to the Cable/Set top box user manual for SAMSUNG TV code.
A "**Mode Not Supported**" message appears.	• Check the supported resolution of the TV and adjust the external device's output resolution accordingly. Refer to resolution settings in this manual.
Caption on TV menu is greyed out.	• **Caption** can not be selected in the TV menu when connected via HDMI or Component. • **Caption** must be activated on the external device.
There is a plastic smell from the TV.	• This smell is normal and will dissipate over time.
TV **Signal Information** is unavailable in the **Self Diagnosis** Test menu.	• This function is only available with digital channels from an Antenna / RF / Coax connection.
TV is tilted to the right or left side.	• Remove the stand base from the TV and reassemble it.
The **Channel** menu is grey out (unavailable).	• The **Channel** menu is only available when the TV source is selected.
Your settings are lost after 30 minutes or every time the TV is turned off.	• If TV is in the **Store Demo** mode, it will reset audio and picture settings every 30 minutes. Please change from **Store Demo** mode to **Home Use** mode in the **Setup** procedure. Press the SOURCE button to select **TV** mode, go to MENU → **System** → **Setup** → ENTER↵.
You have intermittent loss of audio or video.	• Check the cable connections and reconnect them. • Loss of audio or video can be caused by using overly rigid or thick cables. Make sure the cables are flexible enough for long term use. If mounting the TV to the wall, we recommend using cables with 90 degree connectors.
The **PIP** menu is not available.	• **PIP** functionality is only available when you are using a HDMI, HDMI/DVI or components source.
You see small particles when you look closely at the edge of the frame of the TV.	• This is part of the product's design and is not a defect.
POP (TV internal banner ad) appears on the screen.	• Select **Home Use** under **Setup** mode. For details, refer to **Setup** (Initial Setup).

✎ This panel uses a panel consisting of sub pixels which require sophisticated technology to produce. However, there may be a few bright or dark pixels on the screen. These pixels will have no impact on the performance of the product.

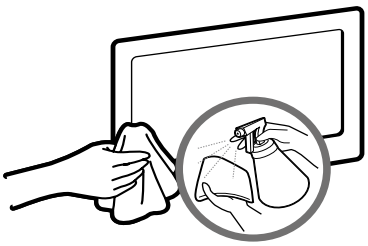
Other Information

Storage and Maintenance

✎ If you attched some stickers on the TV screen, it remains some debris after removing the sticker. Please clean it to watch TV.

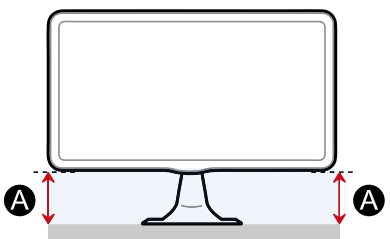
- The exterior and screen of the product can get scratched during cleaning. Be sure to wipe the exterior and screen carefully using the cloth provided or a soft cloth to prevent scratches.

Do not spray water or a cleaning agent directly onto the product. Any liquid that goes into the product may cause a failure, fire, or electric shock.



Clean the product with a soft cloth dapped in a small amount of water.

⚠ CAUTION



If the height of "Ⓐ" on one side is different from the other side, adjust the heights.

Other Information

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Open source licence notice
In the case of using open source software, Open Source licence are available on the product menu.

Other Information

Specifications		
Environmental considerations	Operating	Temperature : 50°F ~ 104°F (10°C ~ 40°C) Humidity : 10 % ~ 80 %, non-condensing
	Storage	Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Humidity : 5 % ~ 95 %, non-condensing
Tilt		-1° (±2.0°) ~ 20°(±2.0°)
Model Name		LT24B301
Screen Size (Diagonal)		23.6 inches (59 cm)
VESA Mounting Interface		75 mm x 75 mm (2.95 inches x 2.95 inches)
Display Resolution		1920 x 1080@60Hz
Power Consumption Normal operation Standby		 40 W < 0.5W
Sound (Output)		5W x 2
Dimension (W x D x H)	(Without Stand)	569.2 x 49 x 349.4mm (22.4 x 1.92 x 13.8 inches)
	(With Stand)	569.2 x 195 x 428mm (22.4 x 7.7 x 16.9 inches)
Weight	(Without Stand)	4.25 kg (9.4 lbs)
	(With Stand)	4.5 kg (9.9 lbs)

✎ Design and specifications are subject to change without prior notice.

✎ For information about power supply, and more about power consumption, refer to the label attached to the product.

✎ Some models may not be available for purchase depending on the region.

✎ If there is no power cut-off switch, the power consumption is "0" only when the power cord is disconnected.

Contact SAMSUNG

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

Country	Customer Care Centre ☎	Web Site
ARGENTINA	0800-333-3733	www.samsung.com
BRASIL	0800-124-421 4004-0000	www.samsung.com
CHILE	800-SAMSUNG(726-7864)	www.samsung.com
COLÔMBIA	01-8000112112	www.samsung.com
COSTA RICA	0-800-507-7267	www.samsung.com
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EQUADOR	1-800-10-7267	www.samsung.com
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TRINIDAD & TOBAGO	1-800-SAMSUNG(726-7864)	www.samsung.com
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